

GRTP1 (G-6): sc-398974



The Power to Question

BACKGROUND

Pituitary growth hormone (GH), also designated somatotropin, plays a crucial role in stimulating and controlling the growth, metabolism and differentiation of many mammalian cell types by modulating the synthesis of multiple mRNA species. These effects are mediated by the binding of GH to its membrane-bound receptor, GHR, and involve a phosphorylation cascade that results in the modulation of numerous signaling pathways. GRTP1 (growth hormone-regulated TBC protein 1), also designated TBC1 domain family member 6, is a 336 amino acid protein with expression modulated by growth hormone. The TBC1 domain of GRTP1 is a region that is notably conserved among GTPase-activating proteins, which characteristically play a role in the cell cycle and mitosis coordination. Interestingly, expression of GRTP1 is significantly up-regulated in post-puberty testis and then maintained in the adult, suggesting that the germ cell may be the major site of GRTP1 function. There are two isoforms of GRTP1, which are a result of alternative splicing events.

REFERENCES

1. Lobie, P.E., et al. 1990. Cellular localization of the growth hormone receptor/ binding protein in the male and female reproductive systems. *Endocrinology* 126: 2214-2221.
2. Boguski, M.S. and McCormick, F. 1993. Proteins regulating Ras and its relatives. *Nature* 366: 643-654.
3. Gruaz, N.M., et al. 1994. Growth hormone (GH) deprivation induced by passive immunization against rat GH-releasing factor does not disturb the course of sexual maturation and fertility in the female rat. *Endocrinology* 135: 509-519.

CHROMOSOMAL LOCATION

Genetic locus: GRTP1 (human) mapping to 13q34; Grtp1 (mouse) mapping to 8 A1.1.

SOURCE

GRTP1 (G-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 99-123 within an internal region of GRTP1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GRTP1 (G-6) is available conjugated to agarose (sc-398974 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398974 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398974 PE), fluorescein (sc-398974 FITC), Alexa Fluor® 488 (sc-398974 AF488), Alexa Fluor® 546 (sc-398974 AF546), Alexa Fluor® 594 (sc-398974 AF594) or Alexa Fluor® 647 (sc-398974 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398974 AF680) or Alexa Fluor® 790 (sc-398974 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398974 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

GRTP1 (G-6) is recommended for detection of GRTP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GRTP1 siRNA (h): sc-75204, GRTP1 siRNA (m): sc-145786, GRTP1 shRNA Plasmid (h): sc-75204-SH, GRTP1 shRNA Plasmid (m): sc-145786-SH, GRTP1 shRNA (h) Lentiviral Particles: sc-75204-V and GRTP1 shRNA (m) Lentiviral Particles: sc-145786-V.

Molecular Weight of GRTP1: 39/30 kDa.

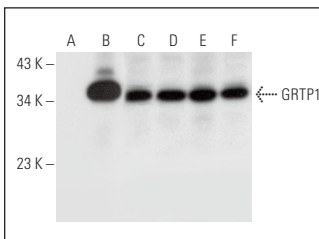
Positive Controls: Caki-1 cell lysate: sc-2224, MIA PaCa-2 cell lysate: sc-2285 or GRTP1 (m): 293T Lysate: sc-120650.

RECOMMENDED SUPPORT REAGENTS

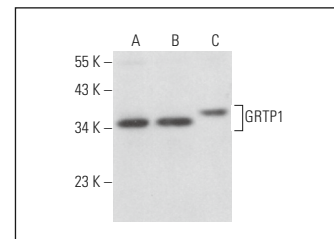
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.
- 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



GRTP1 (G-6): sc-398974. Western blot analysis of GRTP1 expression in non-transfected 293T: sc-117752 (A), mouse GRTP1 transfected 293T: sc-120650 (B), K-562 (C), SK-N-SH (D), MIA PaCa-2 (E) and Caki-1 (F) whole cell lysates.



GRTP1 (G-6): sc-398974. Western blot analysis of GRTP1 expression in Caco-2 (A), MCF7 (B) and F9 (C) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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